

TESTING LABORATORY ACTION LIMITS AND PARAMETERS GUIDANCE

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Introduction

The Vermont Cannabis Control Board maintains parameters and action limits for testing cannabis that effect both the medical and recreational market. Potency and moisture content are found in CCB Rule 2.9. Human pathogen, metal, pesticide, and residual solvent parameters and limits are set through Board guidance found below. Such guidance will not be altered without at least 90 days of notice to licensees and the general public.

Microbiological Parameters and Limits

Parameter	Action limits for trim flower	Action limits for concentrates	Action limits for products and infused products
Shigatoxin producing Escherichia coli (STEC) – Bacteria	None Detected	None Detected	None Detected
Salmonella species – Bacteria	None Detected	None Detected	None Detected
Aspergillus fumigatus, Aspergillus flavus, Aspergillus niger, Aspergillus terreus – Fungus	None Detected	None Detected	None Detected

^{*}CFU = Colony Forming Unit per gram or milliliter (CFU/g or CFU/ml)

Recommend the required microbial testing for cannabis and cannabis products are analyzed by **allowable methods** listed below:

- 1. A validated method using guidelines for food and environmental testing put forth by the USP, FDA, and AOAC Appendix J and cannabis as a sample type; or
- 2. (i) Another approved AOAC, FDA, or USP validated method using cannabis as a sample type."

NOTE: "Another approved AOAC, FDA, or USP validated method using cannabis as a sample type" may include molecular methods, such as qPCR."

Metal Parameters and Limits

Parameter	Action limits for harvest lot and trim flower (ppm, mg/kg)	Action limits for concentrates, products and infused products (ppm, mg/kg, mg/l)	Action limits for soil (ppm, mg/kg) for agricultural use (additional levels for Cr, Cu, Ni, and Zn, see Note 1)
Arsenic	0.200	1.500	
Cadmium	0.200	0.500	0.43
Lead	0.500	1.000	200
Mercury	0.100	1.500	

Note 1: Soil action limits for Agricultural use, (NYSDEC) as referenced in UVM table 2: http://www.uvm.edu/vtvegandberry/factsheets/interpreting heavy metals soil tests.pdf

Additional levels must also be met for Chromium (11 ppm), Copper (270), Nickel (72 ppm) and Zinc (1100 ppm).

Residual Solvent Parameters and Limits

Parameter	Action limits for concentrates, products and infused products (ppm, mg/kg, mg/l)
Acetone	5000
Acetonitrile	410
Benzene	2
Chloroform	60
Ethanol	5000
Heptanes (total)	5000
Hexanes (total)	290
Isopropyl alcohol	5000
Methanol	3000
Methylene Chloride	600
Toluene	890
Xylenes (total)	2170
Any solvent not permitted for extraction	5000

Pesticide Parameters and Limits

Parameter	Action limits for harvest lots, trim flower, concentrates, products and infused products (ppm, mg/kg, mg/l)
Acephate	0.1
Acequinocyl	0.1
Abamectin (each isomer)	0.1
Azoxystrobin	0.1
Bifenazate	0.1
Bifenthrin	3.0
Carbaryl	0.5
Chlorpyrifos	0.04
Cypermethrin (zeta) sum of isomers	1.0
Etoxazole	0.1
Imazalil	0.04
Imidacloprid	5.0
Myclobutanil	0.1
Pyrethrins I and II (sum of isomers)	0.5
Spinosyn (each for Spinosad A & D)	0.1